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REMARKS

At the outset, applicant Dr. Allan Rodrigues, Dr. Gann Xu and attorney Deshmukh take this opportunity to sincerely thank Examiner Stock for graciously agreeing to conduct interview at a very short notice on April 16, 2008. Applicants also appreciate Examiner Stock's helpful suggestions and his insightful understanding of issues presented in the Office Action. Claims 1, 11 16 and 20 in view of cited art, mainly, Cheetham and Falcoff, were discussed. The agreement was reached with respect to the objection to the specification and also with respect to the rejection of the pending claims over cited art, provided claims are amended along the lines suggested in the Interview Summary provided by Examiner Stock.

Each objection and rejection is addressed below under the original subject and numeric heading set forth in the Office Action.

Drawings and Specification

The drawings and specification were objected to for failing to comply with 37 CFR § 1.84(p)(5) because they include the following reference character not included in the specification, namely that designated by numeral 8. The foregoing objection is respectfully questioned since on page 5 in the applicants' response received by US Patent Office on July 18, 2007, the applicants on page 43, line 18 of the specification, as amended, clearly state that "Device 1 further comprises means for configuring computer readable program code devices to cause computer 6 to display on a screen of a monitor 8 of device 1 the optimal viable combination." (emphasis added) Thus, it is submitted that the applicants had fully complied with the requirements under 37 CFR 1.84(p)(5). Reconsideration of the objection is respectfully requested.

Claim Rejections – 35 USC §112, second paragraph

The Office Action stated that claims 16 and 17 were rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. To over the rejection, claim 16 was amended to depend from claim 11 by providing proper antecedence.

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Claim Rejections – 35 USC §102 (b)

The rejection of claims 20, 21 and 23 under 35 U.S.C. § 102(b) as being anticipated by US 5,668,633 to Cheetham et al. (hereafter Cheetham) and remarks associated therewith are respectfully traversed in view of the following remarks:

At the outset, it should be noted from the Abstract of Cheetham and Figure 3 [step 40 (Search database)], it is clear that the process of Cheetham is directed to formulating a color match from previously used and known color formulations and, if needed, modifying more closely the previously matched formulation, making physical trial chips, reading the color spectrum and repeating the process until a match with a customer color standard is attained. The current process is patentably distinct from Cheetham. Unlike, Cheetham, the current process does not access or searches any library of previously made color formulas. Cheetham do not use or refer to the step (iii) in the current claim 20. Cheetham at column 4, lines 60-67 and column 5, lines 1-15 mention searching for best color formula matches from database 26. However, to further the prosecution. Claim 20 was amended to recite what a stored list of colorants comprises, namely “pigments, dispersions, tints, dyes, metallic flakes or a combination thereof” Support can be found on page 17, lines 15-17 and page 18, lines 1-2 of the specification. As a result, it is submitted that Cheetham fail to anticipate current claims 20, 21 and 23.

At the outset, it should be noted that Cheetham requires “a trial run” to determine whether the match is acceptable (col. 3, lines 40 – 64 of Cheetham and Figure 3). Cheetham as seen in Figure 3 teach taking color values from a customer supplied sample (36) by using spectrophotometer, searching a database of previously prepared color chips (40) to pull out a physical color chip (42) that comes close to the color values of the customer supplied sample and then such chip a visually inspected by an experienced color matcher to see if it is an acceptable match (44). If no match is found, a new matching paint is prepared by the experienced matcher, applied over a chip (48), which is then visually inspected to see if there is a closer match (52). If acceptable its color data are entered (54), if not the process is repeated (56, 58 and 60),

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until an acceptable match is made. By contrast, no such trial-and-error steps requiring visual inspection are recited in claim 20 or claims depending therefrom.

Cheetham did not disclose or teach that regulatory practices developed for a specified end use are to be considered. The instant invention requires such a consideration in step (v) of claim 20. Cheetham did not disclose or teach that an acceptability equation for a specified end use is to be considered during the selection of an optimal viable combination from viable combinations. The instant invention requires such a consideration in step (vi) of claim 20. However, to further the prosecution claim 20 was amended to recite the acceptability equation, support for which can be found on page 35, lines 21 to 25, page 36, page 27, page 38 and page 39, lines 1-2 of the specification. Thus, it is not seen why Cheetham anticipate the aforementioned claims, as amended.

Claim Rejections – 35 USC §103 (a)

The rejection of claims 1, 3-7 and 10-14 under 35 U.S.C. § 103(a) as being obvious over US 4,403,866 to Falcoff et al. (hereafter Falcoff) in view by US 6,052,195 to Mestha et al. (hereafter Mestha) and US 4,813,000 to Wyman et al. (hereafter Wyman) and remarks associated therewith are respectfully traversed in view of the following remarks:

At the outset, it should be noted that Falcoff in Abstract disclose a conventional process that essentially attempts to duplicate a paint that has the same color values as that of known standard paint, i.e., the color formula of the standard paint is known before the start of the process. By contrast, in the current process no color formulas of "standard paint" are known. The Falcoff process results in **repeatedly producing test paint samples** and measuring the color values of the test paint samples and repeatedly correcting the formulation to achieve a close matched color, see Example 1, Col. 6, of Falcoff. Unlike what is taught in Falcoff, the instant claims **do not recite producing test paint samples**. Falcoff did not disclose or teach that regulatory criteria for a specified end use are to be considered. The instant invention requires such a consideration in step (v) of claim 1 and means (d) in claim 11. Falcoff did not disclose or teach that an acceptability equation for a specified end use is to be considered during

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the selection of an optimal viable combination from viable combinations. The instant invention requires such a consideration in step (vi) of claim 1 and means (e) in claim 11. In view of the forgoing remarks, it is respectfully submitted that claims 11, 3-7 and 10-14 are not obvious.

The Office Action also alleged that Falcoff teach "selecting one or more preliminary colorant combinations from a stored list of known colorants in accordance with a combinatorial selection criteria to match with said target color values". The aforestated interpretation of Falcoff is respectfully questioned, since Falcoff as seen in Figure 1 and at column 3, lines 49-54 teach dispensing binder solution 7, mill base 8 and tint solutions 10 in accordance with a formula of a paint to be made (column 1, line 63 and see also "FORMULA INPUT" to computer 1 in Figure 1). There is no disclosure, teaching or suggestion in Falcoff, unlike the current claims as amended, of selecting one or more preliminary colorant combinations from a stored list of known colorants, such as those described on page 17, lines 15-17 and page 18, lines 1-6 of the current specification, in accordance with a combinatorial selection criteria, such as those described on page 22, lines 3-13 and page 23, lines 1-25 of the current specification. The Office Action also alleged that Falcoff teach determining concentration of each said known colorant in each of said preliminary colorant combinations in accordance with color matching criteria wherein said concentration of each said known colorant is optimized for optimal match of color values of each of said preliminary colorant combinations. The aforestated interpretation of Falcoff is respectfully questioned, since the applicants have been unable to find any where in Falcoff any disclosure of such as a step. The Office Action also alleged that Falcoff teach balancing said preliminary colorant combinations to allow for the presence of non-colorant components in said matched coating composition to generate one or more viable combinations optimized in accordance with mixing and regulatory criteria developed for said specified end-use and selecting an optimal viable combination from said viable combinations in accordance with an acceptability equation for said specified end-use, said optimal viable combination having an optimal acceptability value for said specified end-use wherein said known colorants and non-colorant components when mixed in accordance with

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said optimal viable combination produce said matched coating composition that when applied as a matched coating visually matches the appearance of said target coating. The aforestated interpretation of Falcoff is respectfully questioned, since the applicants have been unable to find any where in Falcoff any disclosure of such as a step.

However, to further the prosecution, claims 1 and 11 were amended to recite the stored list and selection criteria, neither one of which is taught or suggested in the cited art, even when taken in combination. Further, claims 1 and 11 were amended to recite the acceptability equation, support for which can be found on page 35, lines 21 to 25, page 36, page 27, page 38 and page 39, lines 1-2 of the specification. Thus, it is not seen why Falcoff taken in combination with Mestha and Wyman render the aforesaid claims obvious.

It is alleged in the Office action that Falcoff in view of Mestha and Wyman disclose everything as recited in claims 1 and 11 and in addition Falcoff disclose displaying on a screen of a monitor said optimal viable combination (Fig. 1: 1; evidenced by display of information at col. 6, lines 20-36 and 45-50). The aforementioned remark and rejection associated therewith are respectfully traversed, since at the aforesaid tables in Falcoff at column 6, lines 16-18 only L*, a* and b* values were supplied to the computer. There is no mention of any such values being "displayed" on a monitor. Same holds true for the table at lines 45 to 50 at column 6 of Falcoff. Moreover, there is no support anywhere in Falcoff of displaying the optimal viable combination, such as that presently claimed. Moreover, one of ordinary skill in the art would not be led to the interpretation of Falcoff as alleged in the Office Action since, as seen in Figure 1, once the formula is "inputted" in computer 1, it is colorimeter 19 that monitors paint being made via cell 18 to adjust dispensing of components to mixing vessel 13 in accordance with a formula "inputted" to computer 1. There appears no need to "display" any formula since it has already been inputted.

It is alleged in the Office action that as for claims 12, Falcoff in view of Mestha and Wyman disclose everything as recited in claims 1 and 11 and in addition Falcoff disclose in Figure 1 and column 5, lines 1-27 mixing of components of the optimal viable combination, such as that currently recited. The aforementioned remark and rejection

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associated therewith are respectfully traversed since a user only "inputs" a color formula into computer 1 in Figure 1. There is no disclosure or teaching in Falcoff of how such a formula is to be generated from color values of a target portion of a target coating, such as that on an undamaged portion of an automotive body. However, to further the prosecution, claims 1 and 11 were amended to recite a target portion of a target coating on an undamaged portion of autobody, plastic substrate, marine substrate, or aluminum substrate (Support is on page 10, lines 14-15 and page 11, 1-5 of the specification), which is not taught or suggested in the cited art even when taken in combination.

It is alleged in the Office action that as for claim 4, Falcoff in view of Mestha and Wyman disclose everything as recited in claim 1 and in addition Falcoff disclose at column 8, lines 20-30 that applying said matched coating composition over a substrate to produce said coating that visually matches the appearance of said target coating. The aforementioned remark and rejection is respectfully traversed since Falcoff at column 7, lines 63-68 and column 8, lines 20-30 disclose making a paint that matches the color values of a standard liquid paint (see also claim 1 of Falcoff). There is no disclosure or teaching in Falcoff of how a matched coating that visually matches the appearance of said target coating, such as an undamaged portion of an automotive body, is to be made. Thus, it is not seen why claim 4 is obvious over anticipated by Falcoff in view of Mestha and Wyman.

It is alleged in the Office action that as for claim 7, Falcoff in view of Mestha and Wyman disclose everything as recited in claim 1 and in addition Falcoff disclose a plurality of colorants (Fig. 1: 10-12) and that there may be 5 paint formulas (col. 5, lines 65-67). The aforementioned remark and rejection is respectfully traversed since Falcoff in Figure 1 disclose a conventional way of making a paint from various tints, such as 10-12, which are dispensed in accordance with a color formula of a standard paint inputted in computer 1. Moreover, Falcoff at column 5, lines 65-67 and column 6, 1-3 disclose that computer 1 can be inputted with multiplicity of paint to make multiple paints wherein the device automatically washes mixing vessels before the paint from a next paint formula can be made. The presently claimed invention generates an optimal viable combination from which a paint can be produced whose appearance when applied as a

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coating matches that of a coated target substrate, such as that from an undamaged portion of an autobody. It is patentably distinct from dispensing of multiple paints from a dispenser in accordance multiple paint formulas inputted in a computer. Thus, it is not seen why claim 7 would be obvious over Falcoff in view of Mestha and Wyman.

It is alleged in the Office action that as for claim 10, Falcoff in view of Mestha and Wyman disclose everything as recited in claim 1 and in addition Falcoff disclose a matched coating composition. The aforementioned remark and rejection is respectfully traversed since Falcoff in Figure 1 disclose a conventional way of making a paint from various tints, such as 10-12, which are dispensed in accordance with a color formula of a standard paint inputted into computer 1. There is no disclosure in Falcoff of how to make a matched coating composition that produces a coating having appearance that matches that of a coated target substrate, such as that from an undamaged portion of an autobody. Thus, it is not seen why claim 10 is obvious over Falcoff in view of Mestha and Wyman.

Claim rejections - 35 USC §103 (a)

The rejection of claims 8, 9, 15 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Falcoff in view of Mestha and Wyman, and further in view of Corrigan (US 6,522,977) and Kettler (US 5,929,998) and Steenhoek (US 4,917,495) and remarks associated therewith are respectfully traversed in view of the following remarks:

As discussed above, Falcoff in view of Mestha and Wyman disclose a conventional process that **repeatedly produces test paint samples**, measures the color values of the test paint samples produced and repeatedly corrects the formulation to achieve a close matched color, see Example 1, Col. 6, of Falcoff. Unlike what is taught in Falcoff, the instant claims **do not recite producing test paint samples**. Unlike, the current invention, Corrigan at column 2, lines 1-13 disclose a trial-and-error process that takes color readings by using a spectrophotometer of a coating of an area repaired by a user (column 5, line 9) to compare those color readings against those color readings supplied by a paint supplier and then storing the updated color information for future use. Steenhoek and Kettler disclose devices used for taking color readings of a colored surface. As pointed out in the Office Action, Corrigan and Kettler

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and Steenhoek all teach specific color measurement devices and method and do not teach how matched color compositions can be produced. Moreover, as the color value of a wet paint flowing thorough cell 18 of Falcoff undergoes changes, reading of its color value through a viewing glass window of cell 18 is difficult to read, especially if metallic flakes are present. See Falcoff at column 3, lines 6-68 and column 4, lines 1-10. Thus, it is not seen why one of ordinary skill in the art would substitute the colorimeter attached to the device of Falcoff used for taking readings of wet paint with portable systems of Corrigan, Kettler and Steenhoek used for taking specular angle readings of colored surfaces, absent any teaching suggestion to do so in any of the combined references. Moreover, even when combined, it would not lead to the invention of claims of 8, 9, 15 and 18. It is therefore submitted that Falcoff taken alone or in combination with Mestha, Wyman, Corrigan, Kettler and Steenhoek would not lead one of ordinary skill in the art to arrive at the presently claimed invention covered by claims 8, 9, 15 and 18 and the Patent Office has not met its burden of establishing *prima facie* obviousness of the aforementioned claims absent which the burden has not shifted to the applicants.

The rejection of claims 16 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Falcoff in view of Mestha and Wyman and further in view of Corrigan and remarks associated therewith are respectfully traversed in view of the discussion above.

The rejection of claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Falcoff in view of Mestha and Wyman and further in view of Milosevic (US 4,853,542) and remarks associated therewith are respectfully traversed in view of the discussion above, i.e., it is not seen why one of ordinary skill in the art would substitute the colorimeter attached to the device of Falcoff used for taking readings of wet paint with a spectrophotometer of Milosevic having spherical configuration used for taking specular angle readings of colored surfaces absent any teaching to do so in either of these references.

The rejection of claims 22, 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Cheetham in view of US 4,773,936 to Clark et al. and US 5,571,871

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to Ikeda et al. and remarks associated therewith are respectfully traversed in view of the following remarks:

As discussed above, Cheetham, unlike current claim 20, requires "a trial run" to determine whether the match is acceptable, Col. 3, lines 44 – 64 of Cheetham. The instant invention does not require such "trial run". Since claims 22, 24 and 25 depend from claim 20, it is not seen why said claims would be obvious over Cheetham to those of ordinary skill in the art at the time of the invention. Moreover, color standard mentioned at column 2, lines 56-58 is a color standard, to be matched. It does not teach or suggest how processing of material made by the method of claims 22, 24 and 25 occurs.

The rejection of claim 26 under 35 U.S.C. § 103(a) as being unpatentable over Falcoff taken in combination with Mestha and Wyman and further in view of US 6,502,049 to Takada et al. and remarks associated therewith are respectfully traversed in view of the following remarks:

Claim 26 is not obvious over Falcoff when taken in combination with Mestha, Wyman and Takada et al. in view of aforementioned remarks. Thus, even if one of ordinary skill in the art were to combine the teachings Falcoff taken in combination with Mestha and Wyman with the teachings in Takada et al. it would not lead to the current invention.

New claims 27 to 30 have been added for Examiner's kind consideration.
Support can be found in the current claims 11, 12, 13, 16 and 17.

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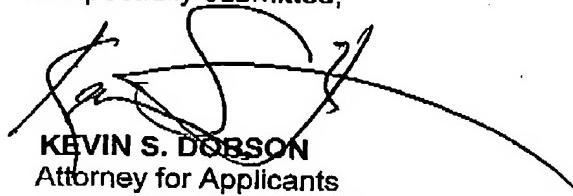
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Conclusion

Applicants respectfully submit that the claim amendments and the distinguishing observations concerning the references overcome the rejections maintained in the non-final Office Action. In view of the foregoing, allowance of the pending claims is respectfully requested.

Respectfully submitted,



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